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动物分类学报

FOUR NEW SPECIES OF THE SUBGENUS PSEUDOXYPORUS OF THE GENUS OXYPORUS FROM SICHUAN, CHINA (COLEOPTERA, STAPHYLINIDAE, OXYPORINAE)

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Abstract Four new species of the subgenus *Pseudoxyporus* of the genus *Oxyporus* are described and illustrated based on specimens collected from Sichuan, China. Among them, *Oxyporus* (*Pseudoxyporus*) *heminigritus* sp. nov. from Batang County, *O.* (*P.*) *jiulongus* sp. nov. from Jiulong and Muli Counties, *O.* (*P.*) *parajiulongus* sp. nov. from Qingchuan County, and *O.* (*P.*) *xiaoae* sp. nov. from Mianning County. A key to the Chinese species of the subgenus is provided.

Key words Staphylinidae, *Oxyporus*, subgenus *Pseudoxyporus*, new species, Sichuan, China

The subgenus *Pseudoxyporus* Nakane and Sawada, 1956 is one of the two subgenera of the genus *Oxyporus*. It differs from the other subgenus *Oxyporus* Campbell, 1969 by its antennal segments 6-10 about 1.0 and 1.5 times wider than long, pubescent throughout, parameres of aedeagus almost reaching to apex of median lobe.

Fifteen species of the subgenus are at present known in the World, of which 3 species have been recorded from China, but not reported in Sichuan.

In this paper, 4 new species belonging to the subgenus *Pseudoxyporus* of the genus *Oxyporus* from Sichuan, China are described and illustrated. Among them, *Oxyporus* (*Pseudoxyporus*) *heminigritus* sp. nov. from Batang County, *O.* (*P.*) *jiulongus* sp. nov. from Jiulong and Muli Counties, *O.* (*P.*) *parajiulongus* sp. nov. from Qinchuan County, and *O.* (*P.*) *xiaoae* sp. nov. from Mianning County. A key to the Chinese species of the subgenus is provided.

All type specimens are deposited in the Life Science College, China West Normal University, Nanchong, Sichuan, China.

Key to Chinese species of the subgenus Pseudoxyporus

1. Body black, Nordwestl. China, Chinkiang (Bernhauer, 1938), Kiangsu (Smetana, 2004) ····· Oxyporus (Pseudoxyporus) angusticeps **(Bernhauer)**
   Body yellow to brownish yellow ····· 2
2. Head black ····· 3
   Head yellow to brownish yellow ····· 4
3. Elytra each with a rectangular black marking at apical portions, Jilin ····· O. (P.) longipes **Sharp**
   Elytra each with a fasciculate black macula extending from outer apical angles to behind scutellum, Jilin ····· O. (P.) puldhellus **Huang et al.**
4. Head with temples black, Sichuan ····· O. (P.) xiaoae **sp. nov.**
   Head with temples yellow ····· 5
5. Elytra yellow at anterior half, posterior black, Sichuan ····· O. (P.) heminigritus **sp. nov.**
   Elytra with triangular black markings at outer apical angles ····· 6
6. Elytral markings extending to sutural apex, Sichuan ····· O. (P.) jiulongus **sp. nov.**
   Elytral markings not extending to sutural apex, Sichuan ····· O. (P.) parajiulongus **sp. nov.**

Oxyporus (Pseudoxyporus) heminigritus **sp. nov.** (Fig. 1)

Diagnosis. The species is similar to *Oxyporus* (*Pseudoxyporus*) *longipes* from Jilin, but can be recognized by yellow head and by black spots on head, neck, pronotum and abdominal tergites 4-6.

Description. Body brownish yellow, surface of body almost smooth and shining; mandibles black in inner margins; one elliptical black spot on vertex, two ones in posterior part of pronotum; propleura and sides of neck with a slightly irregular black spot; elytra yellow at anterior haft and posterior black; abdominal tergites 4-6 each with a pair of subquadrate black spots on sides.

Length: 7.5-7.7mm.

Female. Head subquadrate, wider than long (ratio 1.32), about as wide as pronotum and almost equal in length, gently arcuate behind eyes; posterior angles obtuse; eyes large and convex, temples about as long as eyes seen from above. Antennae distinctly longer than head (ratio 1.43), segments 1-4 elongate; segments 5-10 transverse, about 1.4 to 1.5 times as wide as long; slightly asymmetrical and flattened; apical segment slightly narrower than preceding segment (ratio 0.92); all antennal segments with sparse long setae; segments 5-11 densely covered with fine pubescence. Labrum broadly and deeply emarginate at anterior margin; mandibles shorter than head (ratio 0.83), inner edges evenly curved to bluntly acute apices; maxillary palpi with first segment shorter than second, second longer than third, third slightly wider and shorter than last; apical segment of labial palpi about as wide as length of eye. Clypeus broadly, shallowly emarginate in middle of anterior margin; frons with two longitudinal impressions

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between eyes and with a small median impression, a V-shaped impression after middle of vertex; a few setiferous punctures close to inner margins of eyes.

Pronotum wider than long (ratio 1.19), shorter (ratio 0.47) and narrower (ratio 0.53) than elytra; lateral margins subarcuately narrowed anteriad and posteriad, widest at about anterior one fourth; disc almost impunctate, with two broad and deep oblique depressions after middle.



Figs 1-2. Dorsal habitus. 1. *Oxyporus (Pseudoxyporus) heninigritus* sp. nov. 2. *Oxyporus (Pseudoxyporus) parajiulongus* sp. nov.

Scutellum impunctate, apex rounded, surface almost smooth.

Elytra wider than long (ratio 1.2), slightly widened apicad; each elytron with a row of regular small punctures along suture, two longitudinal rows of coarse irregular punctures in middle, a number of scattered coarse punctures on medial and lateral sides of rows. Wings developed.

Abdomen with punctation of tergites very sparse and vague, surface between punctures with exceedingly fine and dense microsculpture of transverse striae; tergite 4 with a pair of pruinous spots in middle; sternite 8 slightly arcuately produced at posterior margin.

Male: Unknown.

Holotype: female, China, Sichuan, Zhubalong Nature Reserve, Batang County (29°26′N, 99°06′E; alt. 3768m), 17 Sep. 2005, collected by QIU Guang-Hui. Paratype: 1 ♀, same data as the holotype.

Habitat and Distribution. The species was found in fungi. It is at present known from the type locality in Western Sichuan.

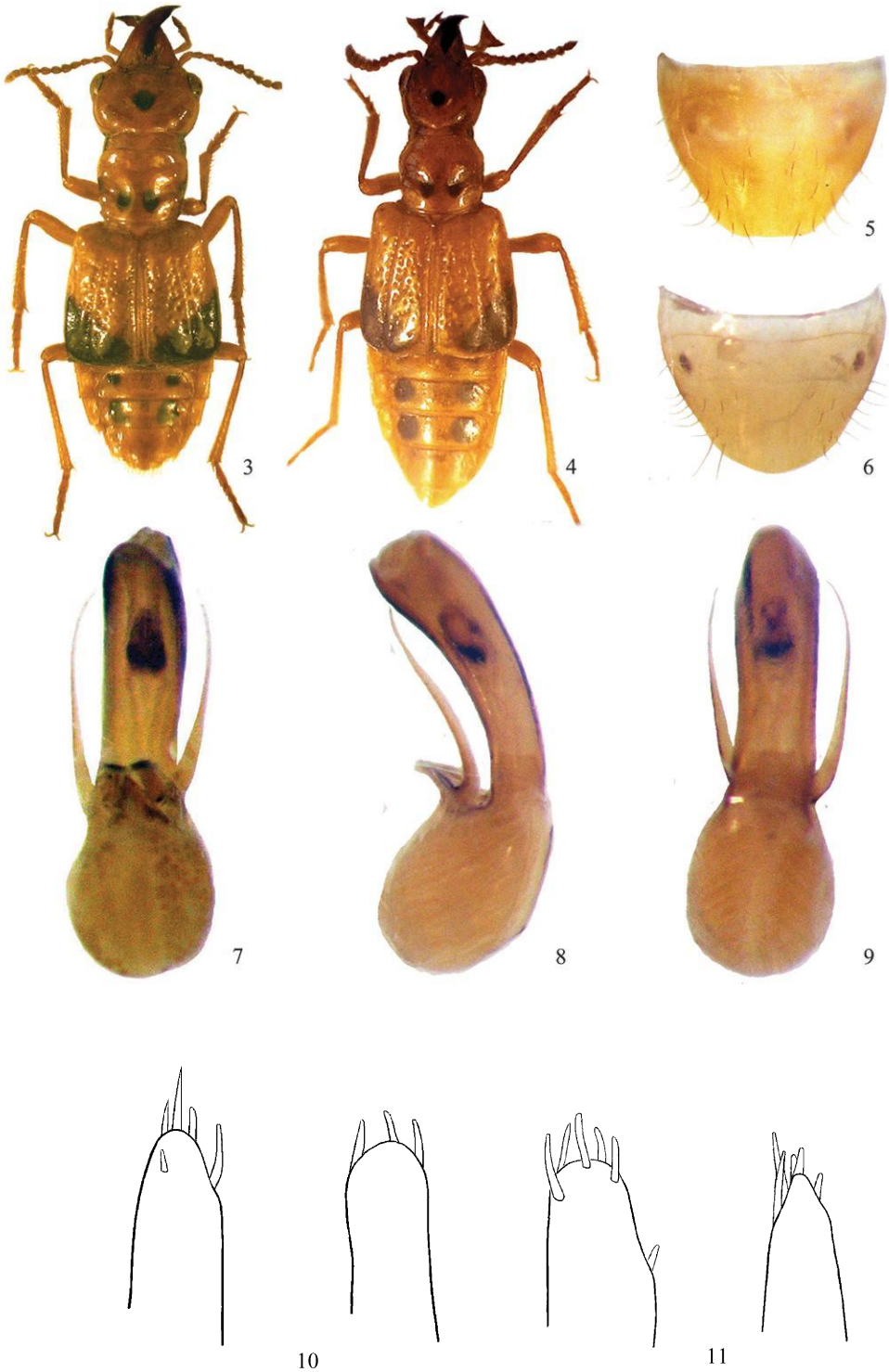
Etymology. The specific epithet refers to elytra black in posterior half.

Oxyporus (Pseudoxyporus) jiulongus sp. nov. (Figs 3-11)

Diagnosis. The species is very similar to *Oxyporus (Pseudoxyporus) heninigritus* from Batang County, Sichuan, but can be recognized by elytra with a large triangular black marking at outer apical angle; black spot on vertex rounder than that of the latter; elliptical black spots on pronotum larger.

Description. Body brownish yellow, surface of body almost smooth and shining; mandibles black in inner margins; one rounded black spot on vertex; two elliptical in posterior part of pronotum; propleura and sides of neck with a slightly irregular black spot; a large triangular black marking at outer apical angle of each elytron extending from half of lateral margin to apex of suture; abdominal tergites 4-6 each with a pair of subquadrate black spots on sides.

Length. 7.3-7.8mm.



Figs. 3-11. *Oxyporus* (*Pseudoxyporus*) *jilongus* sp. nov. 3-4. Dorsal habitus. 3. Male. 4. Female. 5-6. Sternite 8. 5. Male. 6. Female. 7-9. Aedeagus. 7. Ventral view. 8. Lateral view. 9. Dorsal view. 10-11. Apical portions of parameres. 10. Left. 11. Right.

Male. Head subquadrate, distinctly wider than long (ratio 1.6), wider (ratio 1.2) than pronotum and almost equal in length, gently arcuate behind eyes, posterior angles obtuse, eyes slightly large and convex, temples longer than eyes seen from above (ratio 1.38). Antennae distinctly longer than head (ratio 1.65), segments 1-4 elongate, segments 5-10 transverse, about 1.1 to 1.3 times as wide as long, slightly asymmetrical and flattened; apical segment a little narrower than preceding segment (ratio 0.92); all antennal segments with sparse long setae, segments 5-11 densely covered with fine pubescence. Labrum

broadly and deeply emarginate at anterior margin; mandibles longer than head (ratio 1.24), inner edges evenly curved to bluntly acute apices; maxillary palpi with first segment shorter than second, second longer than third, third slightly wider than last and almost equal in length; apical segment of labial palpi about as wide as length of eye. Clypeus broadly, shallowly emarginate in middle of anterior margin; frons with two longitudinal impressions between eyes and with a small median impression, a V-shaped impression after middle of vertex; a few setiferous punctures close to inner margins of eyes.

Pronotum wider than long (ratio 1.2), shorter (ratio 0.71) and narrower (ratio 0.58) than elytra, lateral margins subarcuately narrowed anteriad and posteriad, widest at about anterior one fourth; disc almost impunctate, with three depressions, a transverse close to anterior margin, two oblique after middle.

Scutellum impunctate, apex rounded, surface almost smooth.

Elytra wider than long (ratio 1.08), slightly widened apicad; each elytron with a row of regular small punctures along suture, two longitudinal rows of coarse irregular punctures in middle, a number of scattered coarse punctures on medial and lateral sides of rows. Wings developed.

Abdomen with punctation of tergites very sparse and vague; surface between punctures with exceedingly fine and dense microsculpture of transverse striae; tergite 4 with a pair of pruinous spots in middle; sternite 8 almost truncate at posterior margin.

Aedeagus slightly asymmetrical; median lobe very slightly widened apicad, apical portion obtusely triangular; apex broad rounded; parameres very long and slender, each with 3-6 setae different in size at or near apical margins.

Female. Similar to male, but head about as wide as pronotum, mandibles shorter than that of male; sternite 8 arcuately produced at posterior margin.

Holotype male, China, Sichuan, Mt. Wahui, Jiulong County (28°19′-28°20′N, 101°07′-102°10′E; alt. 3 780 m), 25 Aug. 2006, collected by SONG Dian-Yuan. Paratypes: 4 ♂♂, 8 ♀♀, locality ditto, 3 760-3 780 m, 25-26 Aug. 2006, collected by SONG Dian-Yuan and QI Dong-Ming; 8 ♂♂, 13 ♀♀, Muli County (28°15′-28°19′N, 101°01′-101°06′E; alt. 3 400-3 420 m), 1-2 Sep. 2006, collectors ditto.

Habitat and Distribution. The species was found in fungi. It is at present known from the type locality in western Sichuan.

Etymology. The species is named after the type locality.

Oxyporus (Pseudoxyporus) parajiulongus **sp. nov.** (Fig. 2)

Diagnosis. The species is very similar to *Oxyporus* (*Pseudoxyporus*) *jiulongus* from Jiulong County, Sichuan, but can be recognized by elytral triangular black marking not extending to sutural apex; abdominal tergite 7 with a pair of subquadrate black spot on sides; apical segment of antennae distinctly narrower than preceding segment.

Description. Body brownish yellow, surface of body almost smooth and shining; mandibles black in inner margins; one nearly rounded black spot on vertex, two elliptical in posterior part of pronotum; propleura and sides of neck with a slightly irregular black spot; a large triangular black marking at outer apical angle of each elytron extending from half of lateral margin to half of posteror margin; abdominal tergites 4-7 each with a pair of subquadrate black spots on sides.

Length. 7.0 mm.

Female. Head subquadrate, distinctly wider than long (ratio 1.43), as wide as pronotum and slightly shorter in length, gently arcuate behind eyes; posterior angles obtuse; eyes large and convex, temples a little longer than eyes seen from above (ratio 1.15). Antennae distinctly longer than head (ratio 1.88), segments 1-4 elongate, segments 5-10 transverse, about 1.1 to 1.3 times as wide as long, slightly asymmetrical and flattened; apical segment distinctly narrower than preceding segment (ratio 0.75); all antennal segments with sparse long setae, segments 5-11 densely covered with fine pubescence. Labrum broadly and deeply emarginate at anterior margin; mandibles shorter than head (ratio 0.9), inner edges evenly curved to bluntly acute apices; maxillary palpi with first segment shorter than second, second longer than third, third slightly wider and longer than last; apical segment of labial palpi about as wide as length of eye. Clypeus broadly, shallowly emarginate in middle of anterior margin; frons with two longitudinal impressions between eyes and with a small median impression, a very shallowly V-shaped impression after middle of vertex; a few setiferous punctures close to inner margins of eyes.

Pronotum wider than long (ratio 1.2), shorter (ratio 0.5) and narrower (ratio 0.55) than elytra, lateral margins subarcuately narrowed anteriad and posteriad, widest at about anterior one fourth; disc almost impunctate, with two oblique depressions after middle.

Scutellum impunctate, apex rounded, surface almost smooth.

Elytra wider than long (ratio 1.07), slightly widened apicad; each elytron with a row of regular

small punctures along suture; two longitudinal rows of coarse irregular punctures in middle; a few scattered coarse punctures on medial and lateral sides of rows. Wings developed.

Abdomen with punctation of tergites very sparse and vague; surface between punctures with exceedingly fine and dense microsculpture of transverse striae; tergite 4 with a pair of pruinous spots in middle; sternite 8 arcuately produced at posterior margin.

Male. Unknown.

Holotype female, China, Sichuan, Tangjiahe Nature Reserve, Qingchuan County (32°32′-32°41′N, 104°36′-104°53′E; alt. 1 390 m), 10 Sep. 2004, collected by LIU Kun.

Habitat and Distribution. The species was found in fungi. It is at present known from the type locality in Northern Sichuan.

Etymology. The specific epithet refers to it close to *O.* (*P.*) *jiulongus*.

Oxyporus (*Pseudoxyporus*) *xiaoae* **sp. nov.** (Figs. 12-18)

Diagnosis. The species is very similar to *Oxyporus* (*Pseudoxyporus*) *parajiulongus* from Qingchuan County, Sichuan, but can be recognized by temples and propleura with elongate black fasciae; black spot on vertex and pronotum smaller than those of the latter; small punctures denser on abdominal tergites.

Description. Body brownish yellow, surface of body almost smooth and shining; mandibles black in inner margins; one rounded small black spot on vertex, two elliptical in posterior part of pronotum; temples and propleuras with elongate black fasciae; sides of neck with slightly irregular black spots; a large triangular black marking at outer apical angle of each elytron extending from posterior two fifths of lateral margin to half of posterior margin; abdominal tergites 4-7 each with a pair of subquadrate black spots on sides.

Length: 7.0 mm.

Male. Head subquadrate, distinctly wider than long (ratio 1.4), wider (ratio 1.27) than pronotum and almost equal in length, gently arcuate behind eyes; posterior angles obtuse; eyes slightly large and convex; temples longer than eyes seen from above (ratio 1.4). Antennae distinctly longer than head (ratio 1.91), segments 1-4 elongate, segments 5-10 transverse, about 1.16 to 1.40 times as wide as long, slightly asymmetrical and flattened; apical segment a little narrower than preceding segment (ratio 0.92); all antennal segments with sparse long setae, segments 5-11 densely covered with fine pubescence. Labrum broadly and deeply emarginate at anterior margin; mandibles longer than head (ratio 1.11), inner edges evenly curved to bluntly acute apices; maxillary palpi with first segment shorter than second, second longer than third, third slightly wider and shorter than last; apical segment of labial palpi about as wide as length of eye. Clypeus broadly, shallowly emarginate in middle of anterior margin; frons with two longitudinal impressions between eyes and with a small median impression, a V-shaped impression after middle of vertex; a few setiferous punctures close to inner margins of eyes.

Pronotum wider than long (ratio 1.15), shorter (ratio 0.53) and narrower (ratio 0.55) than elytra; lateral margins slightly subarcauatly narrowed anteriad and posteriad, widest at about anterior one fourth; disc almost impunctate, with three depressions, a transverse close to anterior margin, two oblique after middle.

Scutellum impunctate, apex rounded; surface almost smooth.

Elytra wider than long (ratio 1.08), slightly widened apicad; each elytron with a row of regular small punctures along suture; two longitudinal rows of coarse irregular punctures in middle; a few scattered coarse punctures on medial and lateral sides of rows. Wings developed.

Abdomen with punctation of tergites very sparse and vague; surface between punctures with exceedingly fine and dense microsculpture of transverse striae; tergite 4 with a pair of pruinous spots in middle; sternite 8 almost truncate at posterior margin.

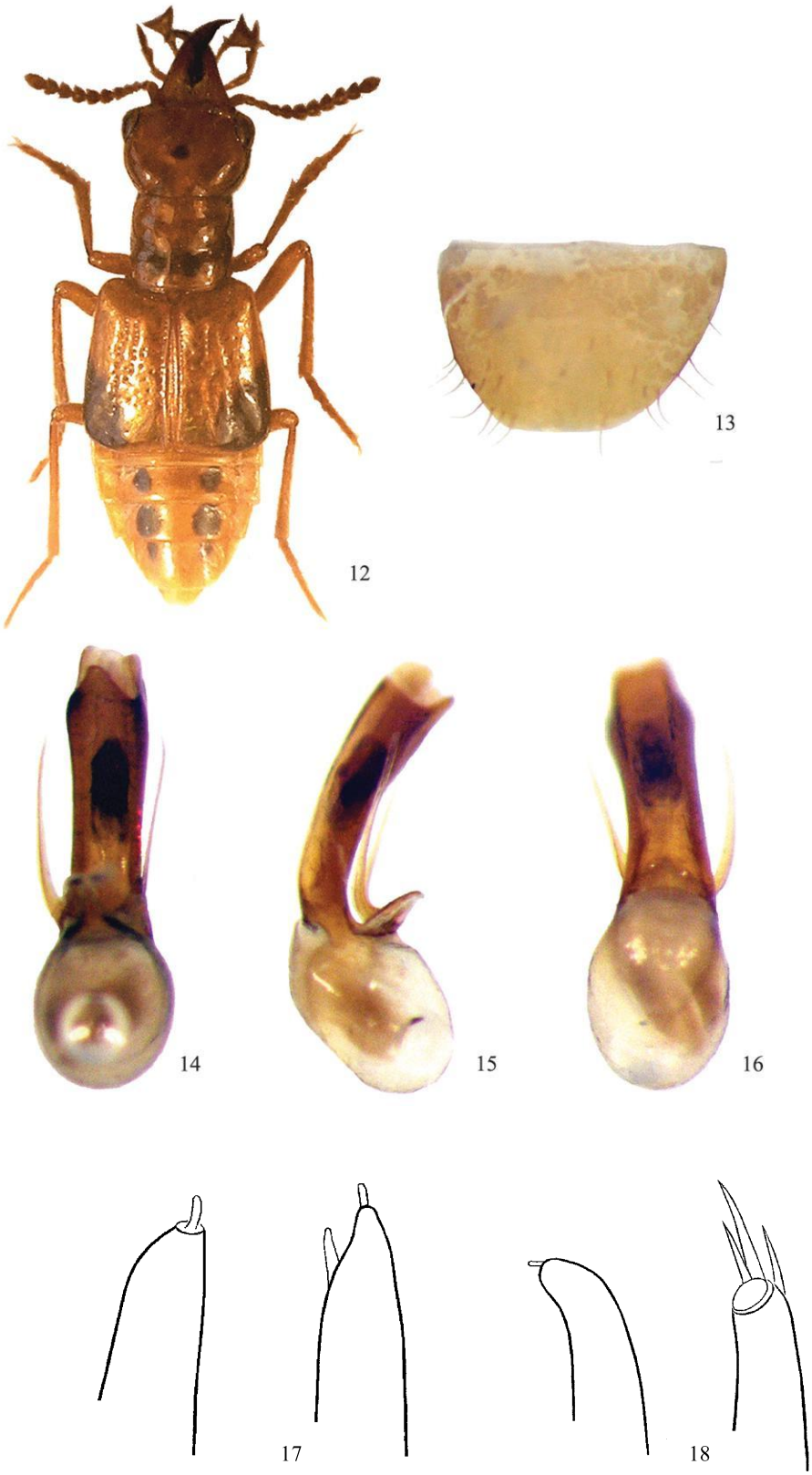
Aedeagus slightly asymmetrical; median lobe distinctly widened apicad, apical portion obtusely triangular, apex rounded; parameres very long and slender, each with 1-3 setae different in size at or near apical margins.

Female. Unknown.

Holotype ♂, China, Sichuan, Yele Nature Reserve, Mianning County (28°50′-29°N, 101°59′-102°16′E; alt. 2 560 m), 11 Sep. 2005, by XIAO Fan. Paratype 1 ♂, same data as the holotype.

Habitat and Distribution. The species was found in fungi. It is at present known from the type locality in Western Sichuan.

Etymology. The specific epithet is patronymic in honor of the collector of the hollotype, my postgraduate XIAO Fan.



Figs. 12-18. *Oxyporus* (*Pseudoxyporus*) *xinoae* sp. nov., male. 12. Dorsal habitus. 13. Sternite 8. 14-16. Aedeagus. 14. Ventral view. 15. Lateral view. 16. Dorsal view. 17-18. Apical portions of parameres. 17. Left. 18. Right.

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REFERENCES

Bernhauer, M. 1938. Zur Staphylinidenfauna von China u. Japan. (9. Beitrag). *Entomologisches Nachrichtenblatt*, 12 (1): 17-39.

Cameron, M. 1930. The Fauna of British India including Ceylon and Burma. *Coleoptera. Staphylinidae*. Taylor and Francis, London. 1: xvii + 471 pp.

Campbell, J. M. 1969. A revision of the New world Oxyporinae (Coleoptera: Staphylinidae). *The Canadian Entomologist*, 101 (3): 225-268.

Herman, L. H. 2001. Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. IV. Staphylinine group (part 1). Euaesthetinae, Leptotyphlinae, Megalopsidiinae, Oxyporinae, Pseudopsinae, Solieriinae, Steninae. *Bulletin of the American Museum of Natural History*, 265: 1807-2440.

Huang, J-J., Zhao, M-J. and Li, L-Z. 2006. Four new species of the genus *Oxyporus* from China (Coleoptera: Staphylinidae: Oxyporinae). *The Entomological Review of Japan*, 61 (2): 205-213.

Ito, T. 1999. A new species of the genus *Pseudoxyporus* from Japan (Coleoptera: Staphylinidae). *Japanese Journal of Systematic Entomology*, 5 (2): 255-258.

Li, J. 1993. The rove beetles of Northeast China. pp. 1-63, 151-163. *In*: Li, J. and Chen, P. (eds.), Studies on Fauna and Ecogeography of Soil Animal. Northeast Normal University Press, Changchun. ii + 265 pp.

Löbl, I. and Smetna, A. 2004. Catalogue of Palaearctic Coleoptera. Vol. 2. Hydrophiloidea-Histeroidea-Staphylinoidea. Apollo Books, Stenstrup. 1-942.

Nakane, T. and Sawada, K. 1956. A revision of the subfamily Oxyporinae in Japan (Coleoptera: Staphylinidae). *The Scientific Reports of the Saikyo University* (A), 2 (2): 64-74.

Nakane, T. 1963. Staphylinidae. *In*: Nakane, T., Ohbayashi, K., Nomura, S. and Kurosawa, Y. (eds.), Iconographia Insectorum Japonicorum, Colore Naturali edita. Hokuryukan, Tokyo. 2: 81-100.

Sharp, D. S. 1889. The Staphylinidae of Japan. *The Annals and Magazine of Natural History*, 3 (6): 406-419.

Shibata, Y. 1997. A redescription of *Pseudoxyporus cyanipennis* (Kirschenblatt) (Coleoptera: Staphylinidae) from Hokkaido, Japan. *Elytra*, 25 (2): 509-514.

Zheng, F-K. 1992. Three new species of genus *Oxyporus* Fabricius from China (Coleoptera: Staphylinidae: Oxyporinae). *Acta Entomologica Sinica*, 35 (3): 326-330.

Zheng, F-K. 1997. Two new species of the genus *Oxyporus* Fabricius from Sichuan and Yunnan Provinces, China (Coleoptera: Staphylinidae: Oxyporinae). *Acta Entomologica Sinica*, 40 (2): 195-197.

中国四川伪巨须隐翅虫亚属四新种 (鞘翅目, 隐翅虫科, 巨须隐翅虫亚科)

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摘 要 记述中国四川巨须隐翅虫属 *Oxyporus* Fabricius, 伪巨须隐翅虫亚属 subgenus *Pseudoxyporus* 4新种, 其中, 半黑伪巨须隐翅虫 *Oxyporus* (*Pseudoxyporus*) *heminigritus* sp. nov. 采自巴塘县竹笆笼自然保护区; 九龙伪巨须隐翅虫 *O.* (*P.*) *jiulongus* sp. nov. 采自九龙县瓦灰山和木里县; 端节伪巨须隐翅虫 *O.* (*P.*) *parajiulongus* sp. nov. 采自青川县唐家河自然保护区; 肖氏伪巨须隐翅虫 *O.* (*P.*) *xiaoae* sp. nov. 采自冕宁县冶勒自然保护区。新种附有彩色整体外形图, 其中的 2个种配有特征图。编制了中国种的检索表。

关键词 隐翅虫科, 巨须隐翅虫属, 伪巨须隐翅虫亚属, 新种, 四川, 中国.
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